

PROPOSITIONS FOR AN UNDERSTANDING OF URBAN SHRINKAGE UNDER PLANETARY URBANIZATION

Giorgian GUȚOIU

Teaching Assistant, PhD, Lucian Blaga University of Sibiu (Romania)

E-mail: giorgian.gutoiu@ulbsibiu.ro

Abstract: *This theoretical essay reflects on the conceptual underpinnings of research in the literature of urban shrinkage. It builds upon criticisms of the literature, mainly on the lack of urban theoretical reasoning, and it argues for a recalibration of both theoretical and empirical urban shrinkage literature based on advancements in the literature of planetary urbanization. Problems associated with the city-centric vision dominant within the literature of urban shrinkage or its usage mainly of demographic indicators, which also represent some of the common criticism employed within the planetary urbanization and critical urban theory, are debated for a reconsideration. Three propositions underpinned by theoretical and empirical developments in planetary urbanization are put forth: geohistorical contextualized urban shrinkage; urban shrinkage through moments of urbanization; multidimensional socio-spatial urban shrinkage.*

Keywords: critical urban theory, geohistorical urbanization, planetary urbanization, socio-spatial, urban shrinkage.

1. Introduction

One solid body of works developed over the last two decades, is dedicated to the causes, conditions and socio-political implications of contemporary declining cities. The incentives of this scholarship spurred in early 21st century as it became evident that many cities of Europe and North America experienced sharp economical, material or demographic decline after deindustrialisation. Despite some evident merits in understanding material declining cities, rising awareness to the phenomenon of urban population loss and conceptual and methodological advancements, as Mathias Bernt (2016) argued in an influential essay, the field suffers from conceptual limitations and pitfalls that hinders both theoretical and methodological further developments. We argue that this problem of conceptualization still persists in the field, and its importance becomes more salient and requires urgent fixing as cities continue to decline. Building on the direction proposed by Bernt, for a reconceptualization at the very heart of urban shrinkage through a solid conceptual understanding of the urban mainly as multirelational process, in this short essay we propose some conceptual orientations for both theoretical and empirical aims drawing on works developed within the school of planetary urbanization. One particular aim is to bring together debates from two fields of the urban that until now were separated and lacked intellectual communication.

Planetary urbanization represents an orientation within urban studies that gained traction during the 2010s, by expanding on past studies of Henri Lefebvre about the planetary totality of contemporary urbanization processes. Much of this tradition, theoretical and empirical, is underpinned on an essay by Neil Brenner and Christian Schmid (2015), but there are also other earlier or parallel works that build upon Lefebvre (Merrifield, 2013; Diener et al., 2006). Planetary urbanization represents a strand of contemporary critical urban theory attuned to questions of differentiation, contextualization, alternative urban spaces and political struggle (Roy, 2015; Brenner, 2009). At its core, planetary urbanization proposes a conceptualization of the urban as a geohistorical, uneven developed processes, socio-political contested, that is internally multirelational and is multidimensional in its socio-spatiality and

spans the planetary landscape. This scholarship received some criticisms because of its allegedly devaluation of urban agglomeration economics (Storper and Scott, 2016) and its central argument of theoretical and empirical totalizing by negating differences (Angelo and Goh, 2020).

This essay proceeds with the following structure. The following section proposes a presentation of the main debates and critiques within urban shrinkage literature. Afterwards, the remaining three sections discuss some propositions for theoretical and empirical recalibration within urban shrinkage building upon main arguments from the field of planetary urbanization.

2. Theoretical imperative: critiques of urban shrinkage

The field of urban shrinkage developed as a robust literature only in the past two decades and includes also studies that don't use the term shrinkage but employ other related concepts, such as decay or decline. The field has developed as mostly dominated by empirical case studies dealing extensively with:

1. trajectories and classes of urban shrinkage (Turok and Mykhnenko, 2008; Wolff and Wiechmann, 2018; Haase et al., 2016)
2. causes, conditions and effects of urban shrinkage and their mutual relationships (Reckien and Martinez-Fernandez, 2011; Szafrńska, Coudroy de Lille and Kazimierczak, 2019; Wang, Yang and Qian 2020)
3. policies and planning response to urban shrinkage (Pallagst, Fleschurz and Said, 2017; Nelle et al., 2017; Hattori, Kaido and Matsuyuki, 2017; Joo and Seo, 2018)

Aside from the empirical endeavours, a group of papers have addressed critical questions of conceptual refinement (Bernt, 2016; Haase et al., 2014; Grossman et al., 2013).

However, there are major concerns expressed within the field in relation to a list of problems associated both with empirical and theoretical aspects. Firstly, although there is general consensus on using the concept of urban shrinkage, the field generally lacks a consensual understanding on what urban shrinkage is and how it should be correctly identified. Bernt (2016) pointed towards three main approaches employed in understanding urban shrinkage: one that is demographical, related to population loss, another one using factors such as macro-economic and social crisis, and a blended approach that underscores causes and conditions of outmigration, ageing, fiscality or housing vacancy. One common criticism comes from the over usage of demographic factors (Doring et al., 2020). In his programmatic paper Bernt argues for a differentiated picture of shrinkage, one that takes into account the many dimensions of urban space, as some studies have done in the recent years (Elzerman and Bontje, 2015; Pallagst, Fleschurz and Said, 2017; Haase et al. 2020). Secondly, the field was criticized for its strong focus on national or single city case studies. To overcome this shortcoming, scholars have proposed deciphering urban shrinkage contingent on national comparison (Doring et al. 2020; Wolff and Wiechmann, 2018). Thirdly, another shortcoming of the field was identified in its non-relational perspective (Doring et al., 2020; Bernt, 2016; Wolff and Wiechmann, 2017) that understands shrinkage as an in-situ event or process detached from contextual, adjacent and networked factors, in which, as Bernt (2016) argued, cities are considered merely containers emptied out of population.

In order for the urban shrinkage to overcome the shortcomings identified in these criticisms, the present paper argues that studies should truthfully follow recommendations proposed by scholars for a more urban-theory informed field. In this regard, the paper proposes theoretical reconceptualization, methodological and empirical orientations built upon developments in planetary urbanization, a strand of urban studies underscoring critical inquiries into urban and cities.

3. Geohistorical contextualized urban shrinkage

Although there is no real consensus within the literature on a definition of urban shrinkage, there is however a recurrent practice on transposing some empirical indicators and their reading on almost all case studies of shrinkage. The most common form is the use of demographic indicators of population loss. It is argued that urban shrinkage unfolds to similar extents as a matter of similar metrics of population loss, thus equalling urban shrinkage in one place and time to shrinkage in another place and time only as a function of similar population loss. This symptom is present in some attempts to formulate a general demographic threshold for considering a city that is undergoing shrinkage (Hollander et al., 2009; Pallagst, 2017). In this view, urban shrinkage and urbanization are considered transgeohistorical and even not necessarily urban since the shrinkage is presented only as a matter of demographic decline often without regard to the urban landscapes and processes. Building on the theoretical framework of planetary urbanization and more generally critical urban theory, we argue such an approach represents a misjudgement since urbanization is geohistorical contextual specific and depictions of shrinkage should be attuned to a contextual analysis. Overlooking geohistorical contexts of urbanization hinders the chances of developing meaningful generalizations of real urban shrinkage, not only of non-geohistorical demographic phenomena, and bringing forward new indicators of urban symptoms attuned to the current rounds of urbanization. In terms of urban landscape and life, the urban shrinkage indicated by a loss of 20,000 inhabitants in a former mono-industrial post-socialist city does not represent the same urban shrinkage as a similar population loss generates shrinkage in the context of postwar American suburbs boom. Differences of contextual shrinkage are both in terms of causes and conditions. Indeed, for the variegated actually existing technocratic capitalist or state socialist urbanizations, for the past two centuries the demography as manpower and city size represents a major indicator of a city's capacities to engage in industrial development, but technological advancements and reshufflings of international division of labour have transformed the demographic calculus of industrialization and its subsequent imprint on urban landscape. The paper argues for a contextual understanding of urban shrinkage attuned to geohistorical patterns of urbanization. Exploring patterns of demographic decline, infrastructural destruction or housing vacancy rates, that are highly common in the literature, can truly expand research when they are explained in relation to the urban landscape of geohistorical rounds of urbanization.

Since urbanization is generated by a multitude of processes associated with the urban landscape, dimensions of urbanization, such as demographics, or infrastructure, which are not urban per se up until they become crossed with urban socio-spatiality, should be analyzed through a metric that acknowledges the weight each dimension and its underlying conditions has on the overall geohistorical round of urbanization. Foremost this conceptual and operational intellectual exercise requires us to think how much demographic decline or other change in variables of urbanization is needed in each geohistorical urban context for us to identify a process of significant urban shrinkage. Intellectual efforts might be placed here in developing a framework of geohistorical metrics of urban shrinkage patterns.

Another main pursuit driven by the thesis of geohistorical urban shrinkage is to relate the phenomenon of urban shrinkage beyond the demographic or material infrastructure to other aspects related and important to different rounds of urbanization. However, the matter of shrinkage specific to urbanization rounds together with the strong temporal dimension opens the question of whether some aspects of urban shrinkage might indeed be considered parts of urban decline or they are associated with decline only in their own materiality. Over the course of history, infrastructural and technological materialities decline, shrink or disappear but they are not necessarily signs of urban shrinkage but of technological and social change within the same domain. As urban infrastructure of postal services declined across the globe in past decades, these were replaced by similar extended or concentrated urbanization of social communication, logistical or technological communication fuelled by the

generalization of telephonic services and rise of internet. In this case, elementary aspects of urbanization might still be present and continue to develop at similar rates, while the former materiality transforms into ruins and may become a part of urban landscape without necessarily triggering shranked urbanization.

The recognition of urban shrinkage attuned to geohistorical contexts of urbanization might move attention to other spaces of urbanization than the North-Atlantic which largely dominates the literature. In the Chinese urban system strongly driven by state authorities, Li and Mykhnenko (2018) have identified processes and causes of shrinkage different than those experienced on European grounds. The recent decade has answered strongly to the call expressed by post-colonial critiques that urged for embracing new geographies of theorizing (Roy, 2009; Robinson, 2011). It can be the best of times for urban shrinkage literature to overcome or enrich models of areal units with categories of analysis developed on the actual urbanization processes developed in different places of the globe.

Opening research of today's shrinking urbanities to theoretical reconceptualization of contextual urbanization helps and requires us to expand the list of indicators. Such is the case with the urbanization of nature, a process that is not transgeohistorical and has particularities through the evolution of capitalist relationships between the social, technological and ecological (Swyngedouw and Heynen, 2003). In the current era of *Capitalocene* issues as pollution or waste are important indicators for grasping the pace and extent of urbanization. Slowing rhythms of urbanization were visible during the COVID-19 pandemic as cities went into lockdown and experienced decrease in air pollution (He, Pan and Tanaka, 2020).

4. Shrinkage through moments of urbanization

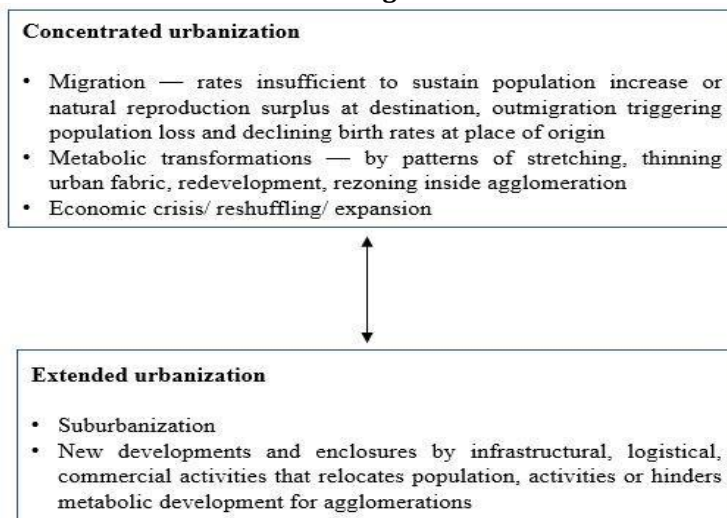
Urban shrinkage is mostly analyzed, identified and described as a condition of territorially-administrative circumscribed municipal units and by employing quantitative data collected at this tier. However, converging with the critique mentioned in the first section, we argue this methodological cityism (Angelo and Wachsmuth, 2015) hinders some important advancements in terms of a fully grasp understanding of relational urban shrinkage. This is more important as the literature identifies two main variables causing urban shrinkage that are located outside the empirically analyzed urban shranked core — suburbanization (Haase et al., 2016; Bartholomae, Woon Nam and Schoenberg, 2017; Wiechmann and Pallagst 2012) and outmigration (Turok and Mykhnenko, 2007; Haase et al., 2016). Unfortunately, we believe that the literature does not provide a fully comprehension on these variables and their importance for shrinkage mostly because it neglects their inherited complex relationality specific to the contemporary capitalist urbanization.

The framework of planetary urbanization proposes an understanding of urbanization as a complex process generated by a dialectic between two mutually constitutive relational moments of extended and concentrated urbanization (Brenner and Schmid, 2015; Brenner 2019; Arboleda, 2020). As the urban is not limited to the bounded universal form of settlement, and instead is conceived as a multifaceted process of both extended and concentrated urbanizations, one complex reading of urban shrinkage should take into account processes in regard to their actual existence as moments of urbanization. The process of concentrated urbanization is associated with patterns of clusterization, agglomeration and urban economies of scale which in the past rounds of preindustrial capitalist urbanization generated the dominant form of urbanization. Through moments of extended urbanization, the current planetary urbanization generates urban developments that are not bounded to the city form and unit. However, these developments represented by the material network of logistics, infrastructure, resource extraction, land enclosure, exclusions, commodified wilderness, sprawling that spawn and densify across landscape are deeply connected to the urban agglomerations as they are vital to the urban reproduction both inside and outside these latter spaces. The operationalization of landscape in the form of extended urbanization represents a departure from former hinterlands of ecological model of settlements, as the new areas serve

and are not necessarily and only connected with the adjacent agglomeration but also with other distant spaces of both concentrated and extended forms of urbanization (Katsikis, 2018).

In this regard, Figure 1 proposes a useful distinction within the two moments of urbanization of the processes that act as causes and conditions of urban shrinkage in capitalist societies. This graphic construction helps to identify processes in each of the two moments and offers an understanding of their intrinsic highly-entangled dialectic which scholars of urban shrinkage could decipher for a complex reading of the relational urban shrinkage phenomenon. Each process mentioned in Figure 1 is associated with urban shrinkage by itself but also in relation with other processes from both concentrated and extended urbanization. As such, in the case of suburbanization, this process generates shrinkage in spaces of agglomerations but it is also related to developments in the operationalized landscape and economic crises and developments in the agglomerations, and may also contribute to shrinkage in other extended urbanities (Keil, 2018). It is important to note that this discussion here revolves around processes and not about sites created by these moments, as some of the processes can belong mostly to one moment but they can be present also in urban sites generated by the other moment. For example, economic crisis and outmigration may appear also in suburbs, in spaces that are generated firstly by extended urbanization but also develop subsequently as agglomeration economies. In this regard, understanding shrinkage in a suburb necessitates a complex reading of agglomeration developments within the suburb, the associated outside agglomeration and the processes of extended urbanization that created and sustain the suburb.

Figure 1. Processes of urban shrinkage within moments of urbanization



Issues of methodological cityism in understanding urban shrinkage could also be analyzed in relation to the many policy responses that appeared during the last decade. Studies that deal with these policies attempt mostly to provide explanatory arguments and understanding on the actual strategies employed for tackling shrinkage, such as regenerative growth or smart decline, and to decipher the intricate patterns of institutional and territorial alliances arrangements deployed in policies or to account for the impact of the policies on the shrinkage process. However, we believe emphasis should be placed also into the critical inquiry of how ideas of cityness affect the development of such policies in terms of both shrinkage diagnosis and solutions and matters of interlocality policy financing and competitiveness.

In this section, we explored the idea of relationality within urban shrinkage in terms of its existence during constitutive moments of urbanization. The following section, continues on

the path of relationality by elaborating avenues for research in the relationality of socio-spatiality.

5. Shrinkage in the multidimensional urban socio-spatial

Avenues of research for the socio-spatiality complex multidimensional existence and how it matters for urban shrinkage are mainly absent from the literature. Although such concerns partially exist in the scholarship, as Wolff and Wiechmann (2018) in their comparative study of European shrinkage point to the necessity of a multiscale scaffolding framework, studies mostly portray shrinkage through a city place-based analysis often incorporating issues of national comparison (Doring et al., 2020) and at many times neglecting the conceptual and empirical advancements made on understanding socio-spatiality during the various past rounds of spatial turns. We argue that this present state approach overlooks the potential for understanding urban shrinkage through its intrinsic multidimensional socio-spatiality. In this regard, we build upon a theoretical paper of Jessop, Brenner and Jones (2008) that synthesises and conceptualizes progresses on the conceptual and empirical existence of dimensional socio-spatiality as a potential territorial, placed, scalar and networked issue and proposes a framework for understanding the complex mutually constitutive multidimensional relationality of socio-spatiality.

Under contemporary round of planetary urbanization, the urban landscape is portrayed as a complex system of entangled socio-spatial relations generated by mutually mutating scalar and territorial regulations, planetary span of urban processes, complex practices of everyday urban life, global networked economies and other urban associated processes that span through the multidimensionality of the socio-spatial (Brenner and Schmid, 2015; Brenner, 2019). The framework developed by Jessop and his colleagues offers directions for a bidimensional study of the territory, place, scale and network (TPSN framework) which represent mutually constitutive, relationally and intertwined dimensions of the socio-spatial. The central ideas of the TPSN framework underpin much of the work done in recent theoretical and empirical writings on planetary urbanization (Brenner, 2019; Arboleda, 2020; Fenton, 2020; Keil, 2018). Basically, the TPSN framework gives bidimensional conceptual orientations for the study of socio-spatial dimensions. While this approach does not fully grasp the complexity of the mutually constitutiveness and relationality of the multidimensional socio-spatial it represents nevertheless and intellectual effort deployed for overcoming one-dimensional centrism in social sciences.

The TPSN bidimensional framework we adapt and propose for the study of urban shrinkage is depicted in Figure 2. We closely follow the structure of the illustration constructed by Jessop and his colleagues and we generated sixteen cells by crosstabulating each of the four socio-spatial dimensions considered a structuring principle with each dimension, including itself, considered as field of operation for the structuring principle. The figure has a heuristic purpose of identifying potential urban shrinkage by socio-spatial dimensions in three situations: 1) for each dimension in itself, 2) for each dimension as structuring principle for the other dimensions and 3) for each dimension as a structured field impacted by the other three dimensions.

Figure 2. Bidimensional socio-spatial relations of urban shrinkage

Structuring principle	Field of operation			
	Territory	Place	Scale	Network
Territory	Enclosures for demolition, redevelopment, persistent decaying, bordering within cities or between different territorial administrative units, borders of social, cultural and demographic behaviors, housing regulation or infrastructure development	Clusters of destruction or mutating local, regional, national, global sites of economic activity, social-demographic, cultural values and behaviors, politico-institutional constructions, housing regulation in a given territory	Politico-institutional decisions of demolition, redevelopment, destruction, construction by multilevel governance	Interlocalities, interstates policies and strategies
Place	Urban shrinkage at borderlands, core or peripheral places within territorial bounds of nation-states, regions, localities	Clusters of destruction or mutating local, regional, national, global sites of economic activity, social-demographic, cultural values and behaviors, politico-institutional constructions, housing regulation	Destruction or mutating clusters of economic activity, social-demographic values and behaviors linked to differently scalar decisions of statal institutions or companies	Actions by local governance, partnerships of private/public actors, actions by networks of demographic reproduction, mutating place-based division of labour by networks of firms, workforce
Scale	Governmental economic and development policies and plans (aimed towards favoured territorial spaces – counties, regions, cities), hindered or enabled economic developments by entangled scalarities of companies and territorial statal spaces	Vertical decisions for relocation, development, destruction of clusters, sites, milieux of economic activity, social-demographic, cultural values and behaviors, politico-institutional constructions, housing	Hierarchies, vertical ontology in firms, politico-institutional actors, housing regulation, demographic, social, cultural organizations or behaviors	Networks of migration or firms with scalar points determined by power laden hierarchies, politico-institutional scaffoldings
Network	Networks, spaces of flows of people, economic activities enabled and hindered by territories	Networks of global cities, networks of clusters of division of labour, networks of migration and social ties with nodal points of clusters	Networks, spaces of flows of migration, firms, social, demographic, cultural values, infrastructural design and maintenance, operations on housing market with ascalar entry points	Networks, spaces of flows of migration, firms, social, demographic, cultural values, infrastructural design and maintenance, operations on housing market

The conceptual orientations in each cell are not exhaustive. They represent some research avenues for an urban shrinkage scholarship attuned to the multidimensionality of present-day socio-spatiality. Most of the processes presented here are built upon the current state of urban shrinkage literature while others are derived from the recommendations put forth in the section of geohistorical urban shrinkage. Readers are invited to further complement, expand and criticize on these orientations.

6. Conclusion

Our paper proposed some strategies for a theoretical reconceptualization of urban shrinkage. As the current literature is frequently criticized for its rather weak engagement with the relationality of urban spaces and for weak its conceptualization of urban shrinkage, we argued for a dialogue between the scholarships on urban shrinkage and the planetary urbanization. In this regard, three major propositions were put forth. Firstly, we argued that an urban shrinkage literature attuned to the planetary urbanization can reconceptualize shrinkage as a process that enfolds with particular geohistorical aspects within different rounds of urbanization. Urban shrinkage can be defined and conceptualized according to the specificities of different geohistorical eras of urbanization. Secondly, as the urban space should be understood beyond the mere territorial boundaries of cities, as most of the critical literature on shrinkage argues, we presented a case for understanding the relationality of shrinkage through

the two constituent moments of planetary urbanization — extended and concentrated urbanization. Thirdly, we presented a framework for understanding the relationality of urban shrinkage through the multidimensionality of urban socio-spatiality. Further studies could engage in a more empirically way our theoretical propositions presented here.

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